



The Ferroalloys Association

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EDWARD J. KINGHORN, JR., *President*

July 26, 2002

Mr. Maximo Diaz

Mail Code: 5304W

USEPA Headquarters

Ariel Rios Building

1200 Pennsylvania Avenue, N. W.

Washington, DC 20460

Subject: Additional Information Requested for Petition for Rulemaking K171/K172 LDR

Dear Max,

We appreciated the opportunity to meet with you and other EPA staff members on Tuesday, July 16 to discuss our Petition for Rulemaking to change the LDR's for the catalyst material, K171/K172. The open discussion was helpful in clarifying the agency position and the activities that are expected in the next four to six weeks. We expect that once you complete your review of the data and make a recommendation to management, appropriate resources will be assigned to this petition so that it can move forward in a reasonable manner.

During the meeting there was a request for some additional information about the PAH data that was included in the original petition, the final disposal method for the material that was sampled, and clarification of a waste code. Specifically, the data tables did not contain the results for benz (a) anthracene, which is a regulated constituent for K171 (and should be regulated for K172). This constituent was included in the analytical results as part of the PAH analysis, but was inadvertently left out of the summary tables. Attached are revised Tables 1 and 2 for the appendix to the Scherger Report, Attachment B in the Rulemaking Petition, which show the benz (a) anthracene results for all samples. Also, attached is a revised summary for the Supplement to the Rulemaking Petition, showing the results for benz (a) anthracene. This data was included in the data sheets attached to the Supplement, but was not included in the summarized table in the text. The results follow the same pattern as the other PAH results. There were no confirmed positive results for benz (a) anthracene, but the detection limits are elevated above the LDR limits of 3.4 mg/kg for several samples. These elevated limits were caused by interferences present in the sample extracts and by the presence of oil and related hydrocarbons that made it impossible to concentrate the extracts. The issue of special sample cleanup was briefly discussed at the meeting as a method to remove interferences. While special procedures sometimes can remove interferences, these attempts are futile when the extracts cannot be concentrated sufficiently to meet the required detection limits. The footnotes in the tables highlight the various reasons for the elevated detection limits.

In several cases, the detection limits were elevated due to the presence of other cyclic and straight chain hydrocarbons. The presence of these constituents was recognized as an issue by EPA during the original rulemaking. It was assumed that the treatment of catalyst for PAH's and reactivity would reduce the levels of these other organic materials. However, with the lack of a test for reactivity and the lack of

a standard for PAH's for K172, coupled with high detection limits above the LDR being used to justify the declaration that the catalyst does not contain PAH's, organic constituents are being landfilled without treatment. Even if the actual regulated PAH's (five specific compounds) are not present above the LDR's, the elevated detection limits strongly suggest the presence of other related materials that should receive treatment.

A question was also raised about the actual treatment or disposal location for each of the wastes that were sampled and analyzed. The final disposal option is known for all but one of the waste streams sampled. The attached revised Tables 1 and 2 (Appendix to the Scherger Report, Attachment B in the Rulemaking Petition), show the treatment/disposal method used for each of the wastes. Most of the wastes in this dataset were recycled, which would be expected. The primary source for samples was from wastes that were being shipped to the recycling facilities. Samples of waste that went to landfill were only available in situations where a generator supplied a sample to a recycling facility as part of the bidding process.

During the meeting, a question was raised about the coding of a waste stream. The waste stream code information (K171 or K172) is based on the information provided by the generator and as reviewed by the recycling facilities staff. Based on the best information provided by the generators about the process generating each waste stream, we believe the waste codes stated in the data tables are correct.

I hope that the enclosed data and this discussion answer the questions that were raised at the meeting. If you or any other EPA reviewers have any additional questions, please contact me directly at anytime.

Sincerely,

Dale A Scherger
Consultant for The Ferroalloys Association

Enclosures (3)

cc: John Hilbert, The Ferroalloys Association
Jim Allen, Squire, Sanders, and Dempsey
Robert Phelan, Environmental Issues Management
Matthew Hale, USEPA
Gail Cooper, USEPA

TABLE 1 PAH RESULTS FOR SPENT CATALYSTS

Sample Number		LDR	A	B	C	F	G	H	I	J
Date		Limit	2/21/01	2/21/01	3/14/01	3/14/01	3/14/01	3/14/01	3/14/01	3/14/01
Waste Code		K171	K171	K171	K172	K171	K171	K171	K171	K171
Disposal Method			Recycle	Recycle	Recycle	Recycle	Recycle	Recycle	Recycle	Recycle
RESULTS										
Benz(a)anthracene	mg/kg	3.4	<33.3	< 333.0	<33.0	<33.2	<32.5	<0.33	<33.0	<332.0
Chrysene	mg/kg	3.4	<33.3	< 333.0	<33.0	<33.2	<32.5	<0.33	<33.0	<332.0
Naphthalene	mg/kg	5.6	<33.3	< 333.0	<33.0	<33.2	<32.5	<0.33	<33.0	<332.0
Phenanthrene	mg/kg	5.6	<33.3	471	<33.0	<33.2	<32.5	<0.33	<33.0	<332.0
Pyrene	mg/kg	8.2	<33.3	1950	<33.0	<33.2	<32.5	3.7	<33.0	<332.0
Lab notes by sample			(1)(2)	(1)(2)	(1)(2)	(1)(2)	(2)	(3)	(2)	(1)(2)

Sample Number		LDR	K	L	D	E	M	N	O	P
Date		Limit	3/14/01	3/14/01	3/14/01	3/14/01	5/17/00	1/18/01	6/4/99	10/14/99
Waste Code		K171	K171	K171	K172	K172	K172	K172	K172	NR
Disposal Method			Recycle	Recycle	Recycle	Recycle	Landfill	Landfill	Landfill	Not known
RESULTS										
Benz(a)anthracene	mg/kg	3.4	<3.3	<32.4	<32.8	<0.33	< 50.0	<1.3	N/A	< 33.0
Chrysene	mg/kg	3.4	<3.3	<32.4	<32.8	<0.33	< 50.0	3.0	N/A	< 33.0
Naphthalene	mg/kg	5.6	<3.3	<32.4	<32.8	0.485	50 J	7.4	N/A	< 33.0
Phenanthrene	mg/kg	5.6	<3.3	<32.4	<32.8	<0.33	50 J	41.0	N/A	< 33.0
Pyrene	mg/kg	8.2	<3.3	<32.4	<32.8	<0.33	50J	17.0	N/A	< 33.0
Lab notes by sample			(1)(3)	(1)(2)	(1)(2)	(3)	(4)	(5)	(6)	none

(1) The sample extract could not be concentrated to the normal final volume.

This results in elevated PRL (practical reporting limit)

(2) Sample was diluted due to high concentrations of non-target compounds.

(3) Internal standard and surrogate failure attributed to matrix interference based on review of chromatogram.

(4) Sample diluted 150 to 1 due to matrix and presence many compounds;

J means detected between the MDL (0.33 mg/kg) and the PQL (50.0 mg/kg)

(5) Author's notation - Sample diluted 4:1 and 20:1 due to the presence of numerous target compounds including acenaphthene, fluoranthene, flourene in addition to LDR PAH compounds

(6) Author's notation - No PAH data reported. Only TCLP was performed for limited organics.

Samples showed leachable levels of BTEX.

NR - Not reported - K171 or K172

Table 2 - PAH Results for Spent Catalyst

Sample Number	LDR	W1	W2	W3	W4
Date	Limit	1/31/01	1/31/01	1/31/01	1/31/01
Waste Code (K171/K172)	K171	K172	K172	K172	K172
Disposal Method		Landfill	Landfill	Landfill	Landfill

RESULTS

Benz(a)anthracene	mg/kg	3.4	<3.27	<3.25	<3.28	<3.26
Chrysene	mg/kg	3.4	<3.27	<3.25	<3.28	<3.26
Naphthalene	mg/kg	5.6	<3.27	<3.25	<3.28	<3.26
Phenanthrene	mg/kg	5.6	<3.27	<3.25	6.56	<3.26
Pyrene	mg/kg	8.2	<3.27	<3.25	<3.28	<3.26

Lab notes by sample (1) (1) (1) (1)

Sample Number	LDR	W5	W6	W7	W8
Date	Limit	1/31/01	1/31/01	1/31/01	1/31/01
Waste Code (K171/K172)	K171	K172	K172	K172	K172
Disposal Method	Landfill	Landfill	Landfill	Landfill	Landfill

RESULTS

Benz(a)anthracene	mg/kg	3.4	<3.30	<3.31	<3.29	<3.32
Chrysene	mg/kg	3.4	<3.30	<3.31	<3.29	<3.32
Naphthalene	mg/kg	5.6	<3.30	<3.31	<3.29	<3.32
Phenanthrene	mg/kg	5.6	5.58	5.62	<3.29	<3.32
Pyrene	mg/kg	8.2	<3.30	<3.31	<3.29	<3.32

Lab notes by sample (1) (1) (1) (1)

(1) The sample extract could not be concentrated to the normal final volume.

This results in elevated PRL (practical reporting limit)

(2) Sample was diluted due to high concentrations of non-target compounds.

**Revised Table – Adding benz (a) anthracene – Table on Page 4 and 5 of Supplement
to Petition on Rulemaking**

Parameter	Concentration	Reference Value
Total antimony	159 mg/kg	
Total cobalt	1210 mg/kg	
Total molybdenum	12,700 mg/kg	
Total nickel	15,800 mg/kg	
Total vanadium	31,500 mg/kg	
TCLP nickel	31 mg/l	11 mg/l (LDR)
TCLP vanadium	24 mg/l	1.6 mg/l (LDR)
Benz (a) anthracene	ND(<26 mg/kg)	3.4 mg/kg (UTS)
Chrysene	13 mg/kg (J)	3.4 mg/kg (UTS)
Naphthalene	ND(<26 mg/kg)	5.6 mg/kg (UTS)
Phenanthrene	150 mg/kg	5.6 mg/kg (UTS)
Pyrene	38 mg/kg	8.2 mg/kg (UTS)